

Claims

1. An organic ultrathin membrane characterized in that an amphiphilic compound having a pigment group and a nucleic acid basenucleic acid base is aligned due to base-pairing with an oligonucleotide which is capable of forming a base pair with the nucleic acid basenucleic acid base to thereby constitute a monolayer.

2. The organic ultrathin membrane according to claim 1, characterized in that the amphiphilic compound has a chromophore in the hydrophobic chain as a pigment group.

3. The organic ultrathin membrane according to claim 2, characterized in that the chromophore is a photoisomerization group.

4. The organic ultrathin membrane according to claim 3, characterized in that the chromophore is an azobenzene group.

5. A cumulative product of an organic ultrathin membrane characterized in that a condensed membrane obtained by compressing a monolayer of an organic ultrathin membrane according to any one of claims 1 to 4 is laminated on a solid substrate.

6. A process for producing an organic ultrathin membrane, which is a process for producing an organic ultrathin membrane according to any one of claims 1 to 4 composed of a monolayer, characterized in that an amphiphilic compound having a nucleic acid base is spread on an aqueous solution containing an oligonucleotide to form a base pair of the nucleic acid base of the amphiphilic compound and the oligonucleotide to thereby constitute a monolayer.

7. A process for producing a cumulative product of an organic ultrathin membrane characterized by compressing a monolayer constituting an organic ultrathin membrane obtained by the process according to claim 6 to form a condensed membrane and laminating the condensed membrane on a solid substrate.